Staff Summary Sheet

	To	Action	Signature (Surname), Grade, Date		To	Action	Signature (Surname), Grade, Date
1	AF/ILEX	Coord	Tinsley, Col, 14 Nov 05		SAF/IEI	Sig	
2	AF/ILE	Coord	K Ferguson, SES, 8 Dec 05		USecAF	Info	
3	AF/IL	Appr	Aimone, SES, 9 Dec 05				

Grade and Surname of Action Officer	Symbol	Phone	Suspense Date
GS-14 Doddington	AFCESA/CESM	DSN 523-6222	

Subject	SSS Date
FY05 Annual Energy Management Report and FY06 Energy Management Implementation Plan	8 Nov 05

Summary

1. Purpose. Obtain SAF/IEI signature on memo (Tab 1) forwarding the FY05 Annual AF Energy Management Report and the FY06 AF Energy Management Implementation Plan to OSD/ATL.

2. Background.

a. Executive Order 13123, 4 Jun 99, requires submittal of an annual energy report. OSD/ATL requires inputs for the past fiscal year on each Service's energy program and a submittal for an implementation plan for the upcoming fiscal year. OSD/ATL has asked for Service Reports by 10 Nov 05 (Tab 2).

b. The FY05 Annual Energy Management Report and FY06 Energy Management Implementation Plan require narratives and several attachments per established DOE format.

(1) The FY05 Energy Management Report narrative is at Tab 1, Atch 1 of 2. USAF/ILGM provided the narrative on Tactical Vehicles and Equipment Fuel Use (Tab 3).

(2) The FY06 Annual Energy Management Implementation Plan narrative is at Tab 1, Atch 2 of 2.

c. The standard facilities energy reduction was –26.1 percent. With the allowance for renewable energy credits and approved exemptions, the energy reduction increases to –30.0 percent. This year's energy reduction goal was –30.0 percent.

3. Recommendation. SAF/IEI sign memo at Tab 1 and forward package to OSD/ATL.

///Signed, GGE, 10 Nov 2005///

GUS G. ELLIOTT JR., Colonel, USAF
Commander
DSN 523-6101

3 Tabs
1. Proposed SAF/IEI Memo w/Atch
2. OSD/ATL Action Memo, 22 Aug 05
3. HQ USAF/ILGV coordination, 17 Oct 05

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

28 DEC 20[illegible]

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE
(INSTALLATIONS)

FROM: SAF/IEI

SUBJECT: Submission of Annual Energy Report Requirements Part 2 of 2

The attached FY05 Annual Report on Energy Management and the FY06 Energy Implementation Plan is provided in accordance with OSD/ATL letter request of 22 Aug 05. If your staff has any questions concerning this matter, please contact Mr. Gerald Doddington, HQ AFCESA/CESM, Tyndall AFB FL, DSN 523-6222.

FRED W. KUHN
Deputy Assistant Secretary of the Air Force
(Installations)

Attachment:
1. FY05 Annual Report on Energy Management
2. FY06 Energy Management Implementation Plan

AIR FORCE

FY 2005 ANNUAL ENERGY MANAGEMENT REPORT

AND

FY 2006 ENERGY MANAGEMENT IMPLEMENTATION PLAN

I. Management and Administration.

A. Energy Management Infrastructure.

1. **Senior Agency Official**. The Senior Agency Official input to be completed by OSD. The DAF Senior Agency Official is Dr Ron Sega, Under Secretary of the Air Force.

2. **Agency Energy Team.** Agency Energy Team input to be completed by OSD. Dr Sega leads the DAF Energy team, with input from the Senior Focus Group (SFG). Reporting to the SFG are 3 working groups: Aviation Operations, Acquisition & Technology, and Infrastructure. Supporting these 3 functional WGs are an Innovative Financing and Strategic Outreach working groups.

B. Management Tools.

1. **Awards (Employee Incentive Programs).**
   - The Air Force participated in the 2005 Federal Energy and Water Management Awards; 17 award candidates were submitted, with one individual award and one Presidential award received.
   - The Air Force received the 2005 Green Power Purchase Award as the largest federal purchaser of green power with more than 41% of the federal governments purchase.
   - HQ AFCESA has developed a rewards program called "Reduced Energy Appreciation Program (REAP)" which rewards the top three installations for the best overall reduction in energy use based on their previous year. The winners were Little Rock AFB AR, Nellis AFB NV, and Lajes AB Azores. Along with the award the base energy manager and their BCE received a trip to Energy 2005 to speak on their successes to the other commands and bases.
   - Several commands have developed energy award programs that distribute funds to their base winners each year. They include:
     - PACAF has a $225K annual award program recognizing long-term and short energy reduction projects at their installations.

- ACC has a base energy award program that awards up to a total of $1.0 million to ACC bases that exceeded the FY05 30% milestone goal and/or improved over last year's performance.

2. **Performance Evaluations.**
   - All base energy managers and each major command energy manager have performance statements that include ratings on implementing energy conservation measures to meet federal goals and Executive Orders for their installations and commands.
   - HQ PACAF is using the Resource Efficiency Manager (REM) concept command wide. All major installations now have a REM assigned at those locations. PACAF is the first command-wide REM program in the AF.
   - HQ AETC is developing a REM program and has two REM's in place.

3. **Training and Education.**
   - The Air Force Institute of Technology (AFIT) Civil Engineer and Services School at Wright-Patterson AFB OH conducts an Energy Management Training (EMT) course. AFIT has also included the energy course material in an on-line computer-training program. Additionally, a one-hour energy briefing is provided in the CE programmer's course.
   - The Air Force Civil Engineer Support Agency (AFCESA) developed a web based ESPC training program providing training for 35 personnel (from engineering, contracting, legal and comptroller areas) from 9 locations.
   - The ANG at base level promotes energy conservation awareness through the following methods: building manager training/meetings, semiannual state employee awareness training, drill weekend assemblies and base newspaper articles. 180 members were trained this year.
   - ACC and PACAF funded the costs for all their base energy managers (26) to attend the 2005 DOE/DoD Energy Workshop held in Long Beach, CA.
   - HQ AFCESA held its annual command energy managers meeting in conjunction with the 2005 energy conference. 78 personnel attended.
   - HQ AFCESA developed and fielded a web based Facility Managers Energy awareness course to assist our base energy managers in training new building managers.

4. **Showcase Facilities.**
   - ACC was recognized by DOE/FEMP as the Air Force's Special Project Poster for 2005. The poster was distributed for October's Energy Awareness Month. The winner was Langley AFB HQ campus complex, converting the HVAC system to a water source heat pump system and improving lighting. Their efforts realized an energy savings of 57,813 MMBtus and 3,824 Kgals of water annually.

II. Energy Efficiency Performance.

A. Energy Reduction Performance.

1. **Standard Buildings.**
   - The Air Force percent change from FY85 is –26.1%.

   (FY85: 98,665 BBtu/629,148 ksf; FY05: 66,991.4BBtu/577,927 ksf).
   - The Air Force percent change from FY04 is –1.6%.

   (FY04: 68,056.5 BBtu/575, ksf; FY05: 66,991.4BBtu/577,927 ksf).

   Note: Renewable energy credit to the energy reduction goals has not been reported in this paragraph. Appling these factors will give the AF a total reported energy target of –30.0%. See DOD energy management data tables, 1.6 and 1.7 for applicable numbers.

2. Industrial and Laboratory Facilities.
   - The Air Force percent change from FY90 is -5.5%.

   (FY90: 13,836 BBtu/66,030 ksf; FY05: 9,608.1 BBtu/48,526ksf).
   - The Air Force percent change from FY04 is 6.9%.

   (FY04: 9,789 BBtu/46,064 ksf); FY05: 9,608.1 BBtu/48,526ksf).

   Note: Three of our industrial bases were closed since the baseline year of FY90 causing a faulty comparison between 1990 and 2004. For the past three years our industrial bases have been pressed into overtime to meet wartime conditions. With 24/7 operations of our flying squadrons to move troops and cargo, plus support to air operations over the Middle East, these aircraft must be refurbished on a more aggressive schedule. For that reason the energy density for these installations has gone up without the increase in SF. Our plan is to continue to use all avenues to reduce the energy usage to include ECIP funding, ESPC/UESC and the DOE Alert program to help identify potential energy projects.

3. **Exempt Facilities.**
   - The Air Force has no exempt facilities; however, the Air Force is exempting the energy consumed by streetlights and airfield lighting. This amounts to 5,747 MWH. This exemption is based on DOE's recommendation that only street lighting and airfield lighting installed after 1985, be allowed. The AF has confirmed these MWH's are from lights installed after 1985.

4. **Tactical Vehicle and Equipment Fuel Use.**

   - The Air Force (AF) made significant positive improvements in our processes for the procurement/lease of alternative fueled vehicles and

utilization of alternative fuels. For the third year in a row, the AF estimates it will surpass the Energy Policy Act (EPAct) Alternative Fuel Vehicle (AFV) acquisition mandate of 75 percent by 23 percent. If the AF's current strategies and assumptions remain unchanged, the AF will continue to exceed the AFV acquisition mandate in FY 2006 & FY 2007 and increase the amount of alternative fuels consumed by AF vehicles. The AF's success is largely due to AF major commands and local commanders placing special emphasis on obtaining AFVs within their owned and GSA leased fleets. Additionally, the AF Petroleum Office (AFPET) has made great strides working with the Defense Energy Supply Center (DESC) in obtaining more alternative fuel infrastructure and alternative fuels. One significant factor for AF's success towards the AFV acquisitions mandate is the increased use of Biodiesel or B20; 7K Gasoline Gallons Equivalents (GGE) in FY 2001, 603K GGE in FY 2002, 714K GGE in FY 2003, 3.3M GGE in FY 2004 to approximately 3.8M GGE in FY 2005.

- While the AF was able to meet the AFV acquisition mandate for FY 2005, we expect to fall short of compliance with the E.O. 13149 fossil fuel consumption reduction goal of 20 percent for FY05. We are increasing the use of alternative fuels and estimate a 14% fossil fuel reduction for FY05. We will continue to utilize CNG, but the availability of CNG vehicles will cause us to shift our focus to the more available E85 fuel. Note: Data to determine the total amount of alternative fuels consumed in our AFVs will not be complete until December 15th due to GSA not being able to provide fuel consumption figures until mid November 05. The following depicts actual alternative fuels and B20 consumption data to date;

Alternative Fuel	FY05 Air Force Sales	% Increase over FY04 Sales
B20 (54 Locations)	3,800,000 GGEs	20%
E85 (15 Locations)	215,000 GGEs	100%
CNG (23 Locations)	115,500 Natural Units	Same as last year

- Thirteen alternate fuel projects (installations to include McGuire AFB, Little Rock AFB, Warfield ANG, Randolph AFB, Sheppard AFB, Niagara Falls ANG, Kirtland AFB, Hill AFB and Forbes Field ANG) are underway (active construction or active design) which will continue to improve our progress to satisfy the mandates and utilizations of alternative fuels. Six of the thirteen projects have an E-85 scope/goal, Four of the thirteen have a Bio-diesel scope/goal, and the rest is overall maintenance (piping or tank maintenance) of facilities to provide alternative fuels. Additionally, per AFPET approximately 45 additional alternative fuel infrastructure projects have been submitted to DESC. Unfortunately, despite our aggressive

AFV acquisitions, increased use of B20, E85, CNG and increased MPG for light duty non-AFVs, we do not anticipate achieving the 20 percent reduction for FY05. Due to the current Global War on Terror and sustained security threat levels at stateside Air Force bases, we expect our covered fleet's overall petroleum fuel consumption will remain constant. Infrastructure will continue to be an impediment and our operations tempo will continue to exacerbate the problem by causing thousands of additional miles traveled. We are confident the AF will continue to be successful in obtaining alternative fuel infrastructure at many of our installations. We further expect them to work diligently at improving the availability of alternative fuels at locations that already have alternative fuel infrastructure in place. HQ USAF/ILGM will continue to provide guidance on obtaining and utilizing alternative fuel vehicles and alternative fuels to the maximum extent possible and make positive/aggressive efforts towards meeting the EPAct and EO13149 mandates.

B. **Renewable Energy.**

1. **Self-Generated Renewable Energy.**

- The amount of the renewable energy reported in Table 1.7 of the Energy Management Data Report is not applied to Standard Buildings for the renewable energy credit, but is applied in the energy scorecard reduction figures. Examples of self-generated energy include:
  - Luke AFB AZ awarded an ESPC to install a 122Kw PV system that will be operational in FY06
  - F.E.Warren AFB WY installed two on-grid wind generation units with a capacity of 1.2MW.
  - USAF Academy generated and captured more than 870K CF of digester gas in lieu of natural gas for use in the process of hot water boiler at the WWTP.
  - Eielson AFB AK has a refuse derived fuel (RDF) program and processed more than 890 tons, generating 12,289 MMBtus saving more than 840 tons of coal.

2. **Purchase of Renewable Energy.**

- The amount of the renewable energy reported in Table 1.6 of the Energy Management Data Report is not applied to Standard Buildings for the renewable energy credit, but is applied in the energy scorecard reduction figures. Total for FY05 is 1047,766 MWH. Dyess AFB and Fairchild AFB purchase 100% renewable power for their installations.

Installation	MWH	State
USAFA	60	CO
RAF Lakenheath	11,178	England
Edwards AFB	132,780	CA
Grand Forks AFB	2,520	ND
Fairchild AFB	67,278	WA
Altus AFB	3,000	OK
Columbus AFB	42,610	AR
Goodfellow, TX	17,884	TX
Gunter	45,906	AL
Keesler, MS	42,000	MS
Lackland, TX	70,800	TX
Laughlin, TX	16,842	TX
Little Rock, AR	39,000	AR
Luke, AZ	3,000	AZ
Maxwell, AL	3,000	AL
Randolph,TX	36,000	TX
Sheppard, TX	48,586	TX
Tyndall, FL	50,400	FL
Vance, OK	12,000	OK
WHMC	5,084	TX
F.E.Warren,WY	4,547	WY
Barksdale	15,817	LO
Beale	14,579	CA
Cannon	9,357	NM
Davis-Monthan	13,146	AZ
Dyess	72,885	TX
Dyess Commissary	1,788	TX
Dyess - Off base sites	602	TX
Ellsworth	23,866	SD
Holloman	13,150	NM
Langley	21,891	VA
Minot AFB	103,202	ND
Mountain Home	9,282	ID
Nellis	23,749	NV
Offutt	23,587	NE
Seymour Johnson	12,520	NC
Shaw	15,869	SC
Whiteman	18,000	MI
Total	1,047,766	

C. **Petroleum.**

- Fuel oil #2/#6 and LPG/propane were used in Air Force facilities in both FY85 and FY04.

- The petroleum reduction from FY85 to FY05 was 72%.
- FY05 = 7,683,327 MBTU; FY85 = 27,453,556 MBTUs.

D. **Water Conservation.**
- The Air Force consumed 38,112.7 MGal of water in FY05 at a cost of $74,854.9. This is a reduction of 7.3% from last year's consumption.

III. Implementation Strategies.

A. Life Cycle Cost Analysis.
- Life Cycle Cost Analysis was used on all new construction projects and retrofit projects, including ESPC, UESC, and ECIP programs. Examples include:
  - Dormitory construction at Barksdale AFB LA (MILCON $15.6M).
  - Dining hall/Airmans Center at Cannon AFB NM (MILCON $9.5M).
  - Infrared heating systems (11) replaced an old forced air heating system at Altus AFB OK.
  - CFL lighting retrofit at Yokota AB JN using FASCAP funding.

B. Facility Energy Audits.
- The Air Force has performed facility audits of 63,734ksf/626,453ksf or 10.2% of the total facility space for FY05.
- The Air Force has performed facility audits of 670,304ksf/626,453ksf or 107% of the total facility space since FY92.

C. Financing Mechanisms.
- The Air Force awarded 8 new ESPC and 3 new UESC task orders for this FY. These task orders include energy infrastructure upgrades and new equipment to help the installations reduce energy and water consumption. Examples include new thermal storage systems, chillers, boilers, lights, motors, EMCS systems and water reducing devices.

ESPC Table of Awarded projects

BASE	Award Date	Awarded TO Total Contractor Investment	Contracting Agent
Altus AFB	31 Mar 05	$3,948,534	AF
Minot AFB	8 Jul 05	$1,937,927	AF
Nellis AFB	25 Aug 05	$3,169,649	AF
Hill AFB	Jul 05	$3,670,000	DOE
Charleston AFB	21 Sep 05	$23,924,000	DOE
Luke AFB	26 Sep 05	$7,536,089	AF
Cannon AFB	5 May 05	$1,986,860	AF
Goodfellow AFB	28 Jun 05	$2,692,246	AF
Total		$49,909,532	

UESC Table of Awarded Projects

BASE	Award Date	Awarded TO Total Contractor Investment	Contracting Agent
Hurlburt AFB	Dec 04	$2,721,871	AF
Andrews AFB	Dec 04	$978,129	AF
Ellsworth AFB	Oct 04	$4,280,000	AF
Total		$7,980,000	

D. Energy Star ® and Other Energy-Efficient Products.

- The AF continues to pursue a policy that all purchases of computers, printers and copiers will be specified as Energy Star compliant.
- Design specifications for new and retrofitted equipment are reviewed to ensure they are in the upper 25% or Energy Star compliant.

E. Energy Star ® Buildings.

- Two AF hospital clinics at Eielson AFB AK and Nellis AFB NV have been designated energy star.
- Facilities #35, 316, 351 and 1030 have all been designated Energy Star at Buckley AFB CO.
- Additionally all new MFH units must be designed to meet the Energy Star criteria.

F. Sustainable Building Design.

- The Air Force Civil Engineer established an AF Sustainable Development Policy on 19 Dec 01. All facility and infrastructure MILCON projects must apply sustainability development concepts in the planning, design, construction, environmental management, operation, maintenance and disposal process by FY09. The Air Force sustainable target for FY05 was 35%. The Air Force did 44 out of 260 projects or 17% (MILCON and major renovation). The following are examples of using sustainable design concepts:
  - Air Combat Command had 4 facilities obtain LEED certification to include a Library at Shaw AFB SC and an ADAL Intelligence production complex at Wright-Patterson AFB OH.
  - Laughlin AFB TX is designing a hybrid water source GSHP dormitory project.
  - The NORTHCOM Addition and Mission Support Facility Addition is in construction at Peterson AFB CO.
  - Consolidated Support Facility at Edwards AFB was rated at a Silver level under LEEDs and was awarded the AF design for sustainability in FY05.

G. Energy Efficiency in Lease Provisions.

- The Air Force evaluates all leased properties for location, cost/SF, and availability and energy efficiency. All these factors are reviewed before accepting a lease.

H. Industrial Facility Efficiency Improvements.

- Hanscom, Hill, Robins, and Wright-Patterson are focusing on steam system improvements through replacing traps and repairing / replacing leaking steam lines.

I. Highly Efficient Systems.

- Elmendorf AFB AK the 611th ASG use waste heat from generators for heating facilities.
- Misawa AB will increase the use of Thermal Storage on the base in all new construction and renovation projects.
- Charleston AFB SC installed Ground Source Heat Pumps (GSHP) to eliminate chiller/heat plants throughout the base.

J. Off-Grid Generation.

- March AFB CA is installing a 300Kw PV system above a carport structure.
- Eielson AFB AK will complete installation of small wind generators and improved solar controllers at 23 remote sites.

K. Electrical Load Reduction Measures.

- Cheyenne Mountain AFS CO uses generators to their advantage by being on the "super peak" kilowatcher tariff and runs the generators when the local utility calls for load shedding.
- Beale AFB CA continues to operate a radio system to limit demand by controlling electric water heaters and air conditioning units. The system allows the base to curtail demand by more than 1MW (about 10%) when electricity shortages are probable.
- FY05 marked the fourth year the USAF Academy participated in Demand Side Management efforts during "super peak" periods called by the local utility. The Academy's automated DSM program duty-cycled non-critical fan and pump motor loads to achieve approximately 4% reduction in peak power demand during the scheduled periods.
- Randolph AFB TX has the capacity to shed 2.4MW with emergency generators.

IV. Data Tables and Inventories.

A. FY 2005 Annual Energy Management Data Report. Previously submitted on 21 Oct 05.

B. B. Energy Scorecard for FY 2005. Previously submitted on 21 Oct 05.

C. Goals of Executive Order 13123 and NECPA/EPACT. Submission is optional.

D. Industrial and Laboratory Facility Inventory.

Building Location	Building Classification
1. Hill AFB UT	Industrial/Process
2. Tinker AFB OK	Industrial/Process
3. Robins AFB GA	Industrial/Process
4. Arnold AFB TN	Industrial/Process/Laboratory

E. Exempt Facilities Inventory. Street and airfield lighting installed after 1985 are exempted in this report.

V. E.O. 13123 Implementation Plan for FY 2006.

(See next page)

AF Energy Management Implementation Plan for FY 2006

I. Management and Administration.

A. Energy Management Infrastructure.

1. **Senior Agency Official**. The Senior Agency Official input to be completed by OSD.

2. **Agency Energy Team.** The Under Secretary of the AF is designated as the Senior Executive for the AF energy program and will chair the AF Energy Senior Focus Group. Within this group three senior level working groups will be established. They will include Infrastructure, Fuels, and Operations and chaired by SAF/IE, SAF/AQ and SAF/XO respectfully.

B. Management Tools.

1. Awards (Employee Incentive Programs).

- The Air Force will continue to use the DOE FEMP Annual Energy and Water Management Awards program to nominate the individuals and bases that exemplify the drive to meet the federal reduction goals.
- Two of the major commands will continue with their awards program by having their bases compete for the best energy/water programs within their commands.
- HQ AFCESA will continue to sponsor the REAP program to reward three installations for the best in energy reduction in the Air Force.

2. Performance Evaluations.

- The Air Force will continue to require each level of management be accountable for energy and water conservation within their units.
- Continuous updates to position descriptions will be made throughout the Air Force.
- The AF is investigating obtaining additional Resource Efficiency Managers (REM) for use at our MAJCOMs. This additional individual will provide the needed depth to help those commands meet the new aggressive goal of 2% reduction per year.

3. Training and Education.

- The AFIT energy-training program will sponsor one training class for new base-level energy managers in FY06.

- The Air Force will continue to provide ESPC training with a web based training program to ensure all newly assigned individuals are educated on how to use ESPC at their installations. This web site will be opened to all agencies both inside and outside the government.
- All energy/water educational information received from outside sources will be disseminated to each major command and all installations.
- The AF will continue to support the annual DoD energy workshop and sponsor the AF MAJCOM energy meeting held in conjunction with the DoD event.
- HQ AFCESA publishes an Energy Newsletter on a bimonthly basis that includes current/upcoming events plus links to energy information both inside and outside the government.

4. Showcase Facilities.

- The Air Force will strive to have at least one new/renovated facility from each of the major commands designated as a showcase facility. These facilities will be considered showcase due to the use of sustainable design criteria and will meet the Energy Star building conditions.
  - Edwards AFB CA, Consolidated Support Facility will be nominated for a showcase award through DOE.
  - HQ AETC is working with Luke AFB TX, Lackland AFB TX, and Goodfellow AFB TX to have their ESCO develop a showcase facility with award documentation.

II. Implementation Strategies.

A. Life-Cycle Cost Analysis.

- The Air Force will continue to require all new construction to be life-cycle cost effective and require the use of established criteria to meet these conditions. Each major command and base will review their respective projects to ensure compliance with the energy criteria.
- ESPC and UESC will be a major tool to accomplish the requirement of implementing projects that meet the 10-year simple payback rule.

B. Facility Energy Audits.

- ESPC and UESC projects will be the primary way for the Air Force to meet the 10% annual energy audits as required by EPAct.
- At least one AF base will be audited by a DOE sponsored energy audit team.

C. Financing Mechanisms.

- ESPC and UESC will continue to be the primary mechanisms used to meet mandated energy/water goals. We have 23 ESPC proposals in the system and

expect to award all this FY for an estimated investment from the ESCO for $183,291K.

- The Air Force will continue to participate in the Energy Conservation Investment Program (MILCON) with the program emphasis on renewable energy projects. For FY06 we have $14M for 10 projects. The annual energy savings expected when these are implemented will be 275,000 MMBtus and over $2M.
- Additionally, finance mechanisms such as the Air Force Productivity Investment Fund (PIF) and Fast Capitalization Fund (FASCAP) will be used to develop projects where appropriate.

D. ENERGY STAR and Other Energy-Efficient Products.

- All bases will be kept current on the use and purchase of products that are Energy Star compliant or in the upper 25% efficiency for that type of product.
- Each base will be informed on where to obtain information from the GSA/DOE and EPA web sites including DOE guidance based on the EPACT 2005.

E. ENERGY STAR Buildings.

- The Air Force will continue to educate the bases on the use of the Energy Star software program and the criteria to apply for this certificate. No estimate of how many facilities will meet the criteria for this FY. All new MFH units will be designed and built using the Energy Star program.

F. Sustainable Building Design.

- The Air Force policy on sustainable design will be used to ensure every MILCON project and major renovation project is reviewed using the current guidance on sustainable design. For FY06 at least fifty percent of the AF projects will be selected to use LEEDs. As shown in our annual report the AF fell short of the FY05 goal. We plan to aggressively pursue this goal with Air staff providing guidance to the field to ensure our MILCON program meets the intent of sustainable design and construction. At this time several commands have policies directing the incorporation of sustainability (LEEDs) within all MILCON projects for FY06 and beyond.
- Robins AFB GA has two projects identified for sustainable design. They are Fire/Crash Rescue Station, $6.9M and Software Support Facility, $21.5M.

G. Energy Efficiency in Lease Provisions.

- The Air Force actively reviews its lease agreements to ensure compliance with energy and water conservation goals.
- All new leases will include reviews to ascertain whether they are Energy Star compliant or built using sustainable design criteria.

H. Industrial Facility Efficiency Improvements.

- Using ESPC and UESC, all energy intensive facilities will be reviewed for potential retrofits to reduce energy consumption.
- FE Warren AFB WY has a programmed ECIP (FY08) to convert forced air heating in high bays in semi-industrial facilities to natural gas fired radiant heat.

I. Highly Efficient Systems.

- ESPC and UESC will evaluate installing these systems where economically feasible. Examples include:
  - The 611th ASG will continue the development of a waste heat loop at Eareckson Air Station.
  - AFRC is performing a command wide study investigating the use of high efficient systems.
  - PACAF will continue to explore the opportunity to build a CHP plant to service the C-17 complex at Hickam AFB HI.

J. Distributed Generation.

- ESPC/UESC/ECIP programs are evaluating the economics of installing off-grid technology, examples include:
  - AMC is pursuing a 5 to 10 MW power production capability using gas produced from a local composting facility at McGuire AFB NJ.
  - ACC is pursuing a waste to energy project at Dyess AFB TX that will produce 5.4 MW.
  - AETC is pursing a project at Luke AFB AZ using landfill gas from the city of Glendale.
  - AETC will install a 122KW solar roof PV system at Luke AFB AZ.

K. Renewable Energy Purchases.

- The Air Force will continue to pursue the purchase of renewable energy.
- ACC is currently partnering with a developer to install an 18MW photovoltaic array at Nellis AFB NV beginning in FY06.

L. Electrical Load Reduction Measures.

- The Air Force will investigate the use of several load reduction techniques this FY. Examples include:
  - Beale AFB CA will continue to operate its radio load shed system to control base demand when electricity shortages are probable/predicted.
  - Pope AFB NC is developing a load-shedding plan to put in place measures that can be activated to aid Ft. Bragg with their Real Time Pricing and Cogeneration plans.

- All Space Command GSU's (Geographically Separated Units) are implementing strategies within their budgets. CFL changeouts, T8 changeouts, energy awareness, turning off lights when exiting workspaces, sensors, premium motors, and VFD's.
- Kunsan AB Korea uses back-up generators to peak shave during the summer months.
- McGuire AFB NJ goal is to award an ESPC task order in FY2006 that will provide for EMCS Demand Limiting.

M. Water Conservation.

- The Air Force is using an AFCESA developed water management guide. The guide has been disseminated to all levels to further educate personnel on water conservation practices.
- Installations have begun incorporating water management plans in their existing operation and maintenance plans.
- Where economical, we will begin initiating water conservation projects using ECIP and the regional ESPC contracts. ECIP has two projects approved in the FY06 program. These projects, $2.8M for Water Efficient Landscaping at Nellis AFB NV and $1.6M for Greywater Irrigation at Beale AFB CA, will save 145,000 kgal annually.
- Randolph AFB TX will install another 200 AMR water meters with leak detection capability.
- Goodfellow AFB TX will implement an ESPC to replace a grass ball field requiring irrigation to a synthetic grass not requiring water.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION
TECHNOLOGY
AND LOGISTICS

AUG 2 2 2005

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND ENVIRONMENT)
ACTING ASSISTANT SECRETARY OF THE AIR FORCE
(INSTALLATIONS, ENVIRONMENT AND LOGISTICS)
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: FY 2005 Annual Energy Management Report

Executive Order (EO) 13123 requires that Federal Agencies measure and report annually to the President their progress in meeting the goals and requirements of the EO. This report is to be submitted to the Department of Energy (DoE) and the Office of Management and Budget (OMB). Defense Agencies who control Federally-owned building space or directly pay the utilities in leased space are required to submit an energy management report to the Office of the Deputy Secretary of Defense (Installations and Environment).

The report continues to cover energy consumption for tactical vehicles and different categories of buildings, water consumption, strategies used to reduce energy consumption and improve efficiency, and renewable energy utilization.

The DoE annual report guidance and OMB Circular A-11 guidance, along with DoD specific guidance and all the relevant downloadable forms, are available at the following website:
http://www.acq.osd.mil/ie/irm/Energy/energymgmt_report/fy05/energymgmt05.htm.

The OMB Circular A-11 is required to be incorporated with the budget submission. In order to meet deadlines set by DoE and OMB, we need your input in accordance with the following schedule:

Report	Due Date
OMB Circular A-11, Exhibit 55	October 28, 2005
FY 2005 DoD Energy Scorecard and Data Report	October 28, 2005
FY 2005 Annual Energy Management Report	November 10, 2005
FY 2006 Energy Management Implementation Plan	November 10, 2005

Please ensure that the information provided in the A-11 matches that in the scorecard, data report, and narrative. Additionally, please provide a detailed explanation for any goal that is not met. Defense Components will only need to provide LPG/Propane data used for mobile equipment for table 1-4 of the "DoD Energy Management Data Report." Fuel consumption data will be provided by the Defense Energy Support Center issues of fuel to consuming platforms.

DLA/DESC is tasked with consolidating all Defense Component information and preparing this report for the Department. Data submissions should be submitted to: desc.aiteam@dla.mil, with a copy to robert.tomiak@osd.mil. My point of contact for this task is CDR Rob Tomiak. He can be reached at (703) 571-9074, FAX (703) 693-2659. DoD agencies should provide a POC and contact information no later than September 30, 2005.

Philip W. Grone
Deputy Under Secretary of Defense
(Installations and Environment)

-----Original Message-----
From: Grages Jeff K Civ AFELM/VEMSO [mailto:Jeff.Grages@langley.af.mil]
Sent: Monday, November 07, 2005 7:57 AM
To: Adams Timothy K Contr AFCESA/CESM; Milligan Ricky Lt Col AF/ILGM; Cernac Tom CMSgt AF/ILGM
Cc: Batchelor Charles F Civ AFELM/VEMSO; Mays Craig E Maj AFELM VEMSO/
Subject: FW: Annual A11-55 Exhibit Annual Energy Report

Tim,
Our portion of the narrative (Para IIA4) looks fine. I'll inform HAF/ILGM that a coordination package is forthcoming.
Thanks
Jeff

Jeff Grages
HAF AFELM VEMSO
Langley AFB, VA
DSN: 574-4410
Comm: 757-764-4410
Fax: 757-764-4415
Website: https://www.vemso.hq.af.mil